

PATENT Customer No. 22,852 Attorney Docket No. 3495.0042-18

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re appln of:	) ATTN: BOX ISSUE FEE	Ξ
Gerard ORTH et al.	Batch No. K64	
Serial No.: 09/934,659	) Group Art Unit: 1656	
Filed: September 22, 1997	) Examiner: E. Campbell	

For: IMMUNOGENIC COMPOSITIONS OF HUMAN PAPILLOMAVIRUS RECEIVED

Assistant Commissioner for Patents Washington, DC 20231

JAN 2 2 2002

Sir:

TECH CENTER 1600/2900

## SUBMISSION OF FORMAL DRAWINGS

Subject to the approval of the Examiner, please replace the informal drawings with the ten (10) sheets of formal drawings filed herewith (Figures 1, 2, 3, 4A, 4B, 5, 6, 7, 8 and 9). If the formal drawings for any reason are not in full compliance with the pertinent statutes and regulations, please so advise the undersigned.

If any fees are necessary for the submission of these formal drawings, please charge our Deposit Account No. 06-0916.

By:

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

Dated: November 13, 2001

Timothy B. Donaldson Reg. No. 43,592

Tel: (202) 408-4058 Fax: (202) 408-4400

Email: timothy.donaldson@finnegan.com

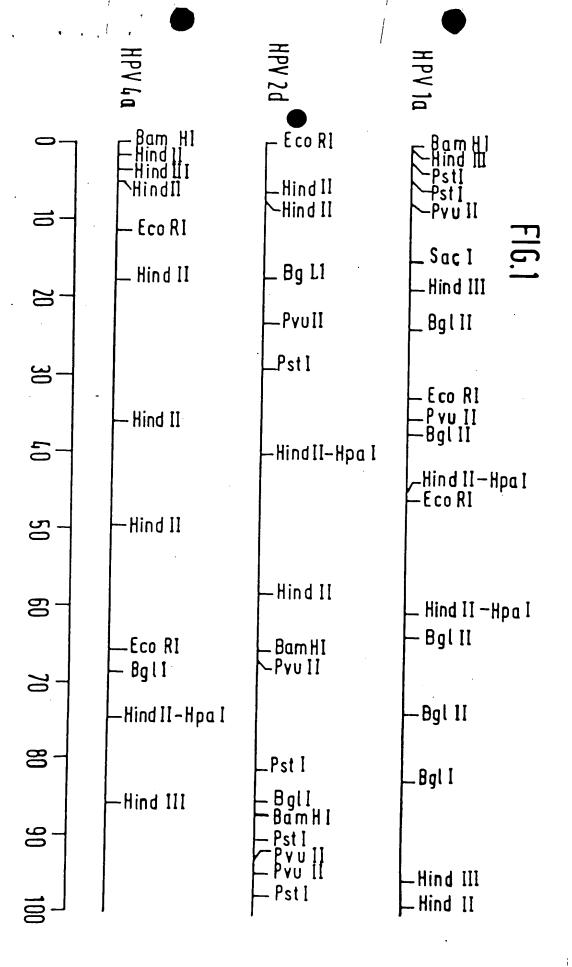
RECEIVED

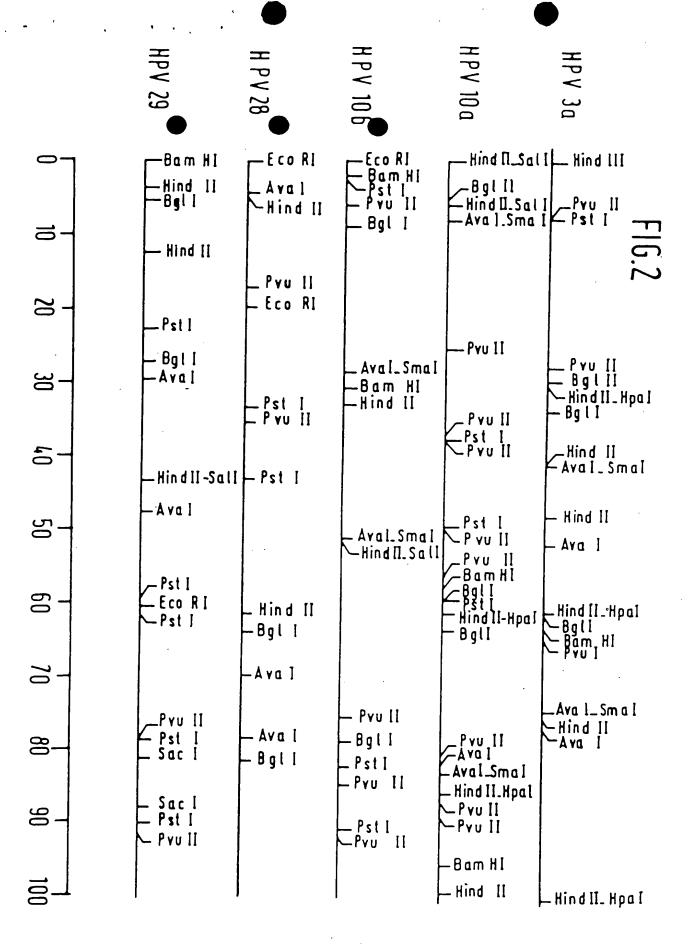
JAN 2 8 2002

Technology Center 2100

LAW OFFICES
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L. L. P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
202-408-4000

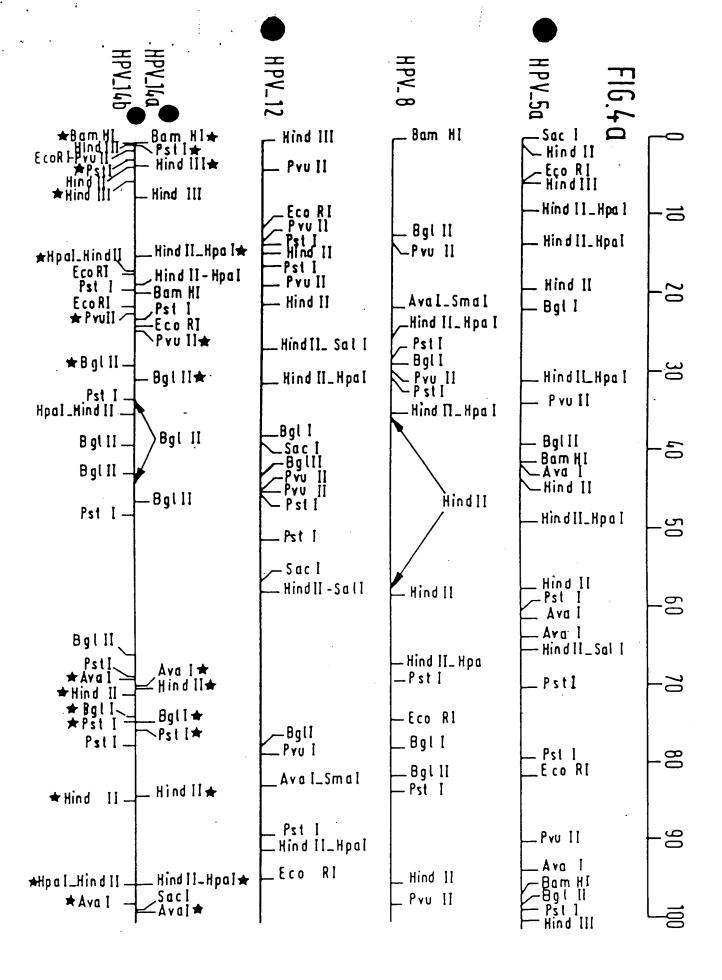
231202



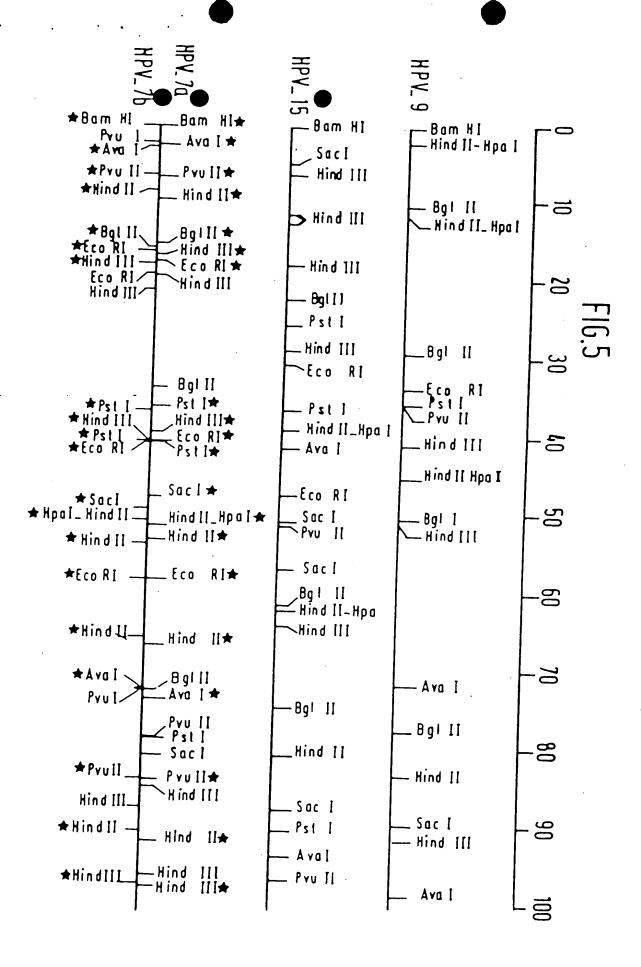


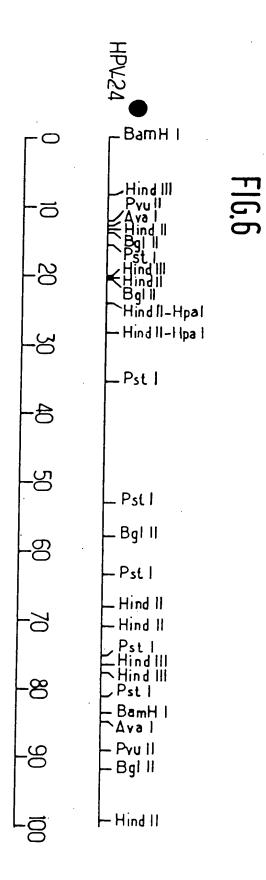
,	H PV 24	ME STEP STEP	HPV-50 L	,
··	Bam HI Hind III	Bam HI ≠ Ava I ★ P vu II★ 	Sac I Hind II Eco RI Hind III Hind III	
	Pyu II Hind II Bgl II Pat III	Bgl II★ Hind II★ EcoRI★	_ Hind II _ Hpa I _ Hind II	FIG. 3
	Hind III Hind II Bgl II Hind II. Hpa I Hind II. Hpa I	Hind III	— B g l I	20
	Pst I	— Bgl II — Pst I★ — Hind III★ — Eco RI★ Pst I★	— Hind II_Hpa I — Pvu II — Bgl II	30 4
		Pst 1★  — Sac 1★  — Hind II_HpaI ★	Bam HI Ava I Hind II Hind II_HpaI	40 50
	— Pat I — BglII	Hind II *	— Hind II — Pst I — Ava I	60
	Pst I Hind II Hind II	— Hind II★  Bgl II	_AvaI _Hind Il_Sal I _Pst I	70
	Pat I Hind III Hind III Pat I	Pvu II  Pst I  Sac I	Pst I Eco RI	- 80
	— Bam HI — Ava I — Pvu II — Bgl II	Pvu II★ Hind III — Hind II★	_ Pvu       _ Ava	90
	—Hind II	— Hind III — Hind III★	Bam HI Bal II Pst I Hind III	100

.

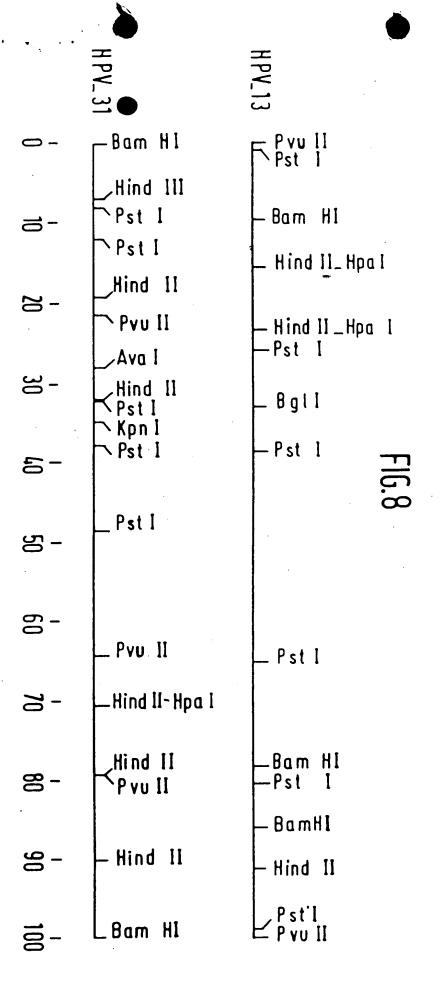


HPV_23	.HPV_22	HPV_21	HPV_ 20	HPV 19
Bam HI From RI Aya LI-HpaI Hind II-HpaI Bal II Pst I	Sac 1	Bam HI Pvu II Hind III Hind III	Ava I Pvu II Hind III Pst I Bam HI Hind II Hind III	Bam HI Pst I
- Sac I - Hind III - Eco RI	Bgl II Pst I Hind II	Hind II_ Hpa I Hind II Hind II Hind II_ HpaI	Hind II _ Hpa I	FIG.4b
Hind II Pst I Sac I	Eco RI	Pst I Bgl I	PstI _Hind II - HpaI _Pvu II _Bgl I _Pst I _Pst I	Pvu1
	Hind II  Bgl II  Pst J  Hind II-Hpa I  Hind III  Ava I  Hind II  Ava I	Pst I Bgl II		
Bgl I	Pst I Bgl II Hind III	Pst I Eco RI Pst I Bgt II	Bgl II Bgl II Pst I Hind II	Hind II Pvu II Pst I Pst I
Hind II	Ava I	Pst I  Hind II  Hind III  Hind III Sal I	Bgl II	Pvu]]
Pru II  Eco RI	Pst I Pst I Ava I—Sma I	— Bgll — Pvu I — Hind II_Hpa I — Pst I	Hind II Pru II BglI Bam HI	Ava I Hind III Hind III Bal II Hind II
Pst I Bgl II — Ava I	`Hind III — Hind III — Hind II	P vu I Eco RI Pst I Hind II	—Hind II → Hind II _ Hpa I	Hind III  Pvu II  Hind III_Hpal  Pvu II  Bgl II
_ Bg   II Pst I	Hind III	_ Ava I	— Bam HI — Hindll-Hpal	Hind II — Eco RI





·				
		•		
·	₩ PV_ 32	HPV_14b	HPV_8	HPV_5 a
	-32	5		- - - -
٢٥	-Bgl II -Xba I	Hind III	- BamH I	Sac I Hind II Eco RI
		Eco RI Eco RI Pst J Hind III		Hind III
-10	— H pa II		Bgl II	— Hind II-Hpal — Hind II_Hpa I
		Hind II _ Hpa I _ Eco RI _ Pst I	Pvu II	·
20		Eco RI Pru II	_ Aya I. Sma I	Hind II F 7
	Sph I		Hind II_HpaI  Pst I	
30	Hinc II_Hpa I	Bgl II Pst I	Bgl I Pvu II Pst I	—Hind II _Hpa I
	-	Hind II_Hpa I	Hind II_HpaI	P vu [[
-60		Bgl II		Bgl II Bam HI
	ـ X ba I	Bgl II	Hind II	Ava I Hind II
50	H pa II	Pst I		— Hind II_Hpa I
-				Hin d II
- 60			Hind II	Pst I Ava I
	,	Bgl II	uindii Waa	— Ava I — Hind II_Sal I
70	D = 1 T	Pst I Ava I Hind	— HindII_Hpa — Pst I	Pst I
	Bgl I	Bgl I PstI	Eco RI	
_80		Pst I	- Bgl I	Pst I
0		Hind II	Bgl II Pst I	Eco RI
90				P vu II
		Hind II_ Hpa I	Hind II	Ava 1 Bam H I
100	Hinc II	— Ava I	Pvu II	Bgi II  Pst } Hind III



HPV_IP2	FIG.9	HPV_IP4	
-Bgl II(0) - Hind III (3.8) -Pst I (8.6)		97	Eco RI Pst 1
— Kpn I (12.5)		70	BglI
Pvull (22.5) Pst I (23.8) Pst I (25.7) Hind II (26.7)		20	- Pst I - Kpn I
- Hind III (29.8) XbaI (30.2)		30	Pst i Kpn I
- KpnI (40.4)		6-	D 1
_ Bg( I (47.6) _ Pst I (51.4)		50	Pvu I Hinc II Pst I
		8-	Hinc II - Hpa I
Pvu II (73.5)		70	Kpn I BamH I
Hind II (74.3) - Aval - Sma I (76.9)		80	Ava I Hinç II
-Hind II-NpaI (85.7) -Hind II-NpaI (89.5)		90	Sact Pst   Hind III Pvu   I Hinc II
_ X bal (96.2) _Bgl II (100 )			├— B a m H I